

THE PARADIGM OF THE RHINEAN SCHOOL. PART 1

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Philosophers of science have so far neglected the field of parapsychology. They tend to view it, together with phrenology and psychoanalysis, as a convenient and pedagogical example of a pseudo-science without acceptable methodological foundations. In general philosophers of science are more familiar with the natural sciences than with the behavioural sciences, and parapsychology ranks much lower in the hierarchy of investigatory disciplines. There are exceptions however, - e.g. Micheal Scriven - but the sparse treatment of parapsychology within the philosophy of science shows profound ignorance and bias. (I do not include analytical philosophers as Broad, Flew, Mundle etc. in this generalization. They have of course made important studies of specific problems in parapsychology).

I shall give one example of a typical reaction from a meta-scientist. Mario Bunge's "Scientific Research" (1967) is an excellent and authoritative textbook. It has pedagogical merits and of course he does not want to confuse "good" science with "bad" science. Examples of improper methods and logic are naturally taken from recognized pseudo-sciences like parapsychology and psychoanalysis. The line between scientific and non-scientific research groups is kept intact. However when dealing with parapsychology he is guilty of simplifications and misreadings, which he does not exhibit in other parts of the book.

Bunge considers parapsychology as a pseudo-science for the following reasons (1967: 36-40). 1) Parapsychologists do not use open hypotheses. Concepts such as ESP force them to use certain interpretations. 2) The statements of parapsychologists are loose and without informative content. They are not connected to other fields of knowledge. If they were, they would cease to be parapsychological phenomena, i.e. non-normal or non-physical. 3) The claims of parapsychologists are non-naturalistic. The phenomena are a priori impossible, since they contradict accepted scientific knowledge. 4) The experiments suffer from methodological weaknesses as a) frauds, b) lack of repeatability (at least in front of

sceptics), c) optional stopping, d) misapplied statistics such as non-random samples. 5) Parapsychologists test their theses "en masse" and not one by one, and therefore they have no experimental control of independent variables. Also the tests are insensitive as the parapsychologist afterwards explains away any failures on the part of the subject as displacement-effects or psi-missing. 6) Parapsychology has not in 5000 years (!) produced one single law or definite prediction, nor even an empirical regularity or a certified fact. "In other words, psychical research has not attained the goal of science - and has never aimed at it" (p. 40).

Most of Bunge's criticism is based on an ignorance of the literature - his main sources being Price and Hansel - while some of his points would apply to research 30 - 40 years ago. However, some of the criticisms are an embarrassment to parapsychology, and these will be discussed below, together with the concept of science.

One of Bunge's arguments surprises me - the a priori - argument. It is a classical argument against parapsychology. It stems from Hume and has been used by Price and Hansel. Nowadays it is seldom used, but when specific critical arguments are presented the a priori argument is implicit: Parapsychological experiments have to be weak and untenable because the phenomena are impossible!

I do not believe in the a priori argument. The history of science shows that it is too dogmatic. It would reject all statements which question the orthodox system of science. Intellectual revolutions in science would therefore be impossible or belong to history. Nowadays science has reached a point where only minor corrections are necessary. This argument is based on an inductive concept of science, implying that scientific knowledge accumulates from basic and eternal facts, and that scientific laws are infallible. Empirical historical studies have proved, as shown by modern philosophers of science (Kuhn, Feyerabend and others), that this is a naive and outmoded concept of science.

The apparent contradiction is not one between psi and the laws of physics, but between psi and certain basic limiting principles (Broad, 1953), or paradigmatic pre-suppositions shared by most contemporary researchers, e.g., "no mental event exists without a physical basis", or "no effect can precede a cause". These principles seem to be metaphysical and not exclusively scientific, but they govern the selection of problems and hypotheses in a particular research tradition. It is from the standpoint of these metaphysical principles - world-picture assumptions - that theories and findings in science are interpreted and scrutinized. They can not be directly verified or refuted. They belong to the inner core of a paradigm and are rarely ever challenged. It is probably premature to state whether parapsychology threatens all, or some, of these principles.

For the sake of argument let us accept the view that some laws of nature really are threatened. But laws of nature are never refuted. It happens that universal laws without exceptions and limitations in extension are stated, and after some time are proved to be false in areas in which they had earlier not been sufficiently tested. Such a law has to be restated as a law formula with a limited validity, beyond which it may be false. The special theory of relativity did not invalidate Newtonian physics, but instead it incorporated the classical physical laws as special cases within twentieth century science and with limited extension. They may not apply to micro- and macro events. In the same way, those laws which in the future may happen to conflict with established psi-phenomena will have to be improved with some restricted formulations. At any rate, they will not show up as "false laws".

The validity of parapsychological phenomena is not a question of relying on or not relying on e.g. the energy principle!

In my opinion there are very good reasons for a direct confrontation between parapsychology and the history and philosophy of science. Of course, if the evidence for psi is acceptable, the paradigm of behavioristic psychology is faced with a serious anomaly. This may require the help of philosophers of science in order to formulate the paradigmatic confrontation and to work out a solution to the problem of relating parapsychological phenomena to the scientific framework.

But regardless of the claims of parapsychology being well-grounded or not, reasons still exist to consider parapsychology an important topic of research for metascientists. The philosophy of science may be conceived as a discipline which serves the other sciences. When choosing topics of research, one of the first rules ought to be the application of metastudies within the field. In parapsychology the existing problem situation expresses great need for theoretical studies, which has been acknowledged by individual researchers (e.g. Thouless, 1968).

The purpose of the present paper is to formulate the world-picture and concept of science within a dominant tradition in modern parapsychology. I believe that a discussion of general and fundamental questions or the examination of a particular field from an outsider's viewpoint is an important contribution to a more mature self-reflection amongst researchers.

THE RHINEAN SCHOOL

There exists no consensus of opinion as to which investigators we should include as parapsychologists. A psychologist publishing a paper on ESP in a psychological journal may not regard it as parapsychological research. He can express himself as if he, being a psychologist, is only using a design similar to those used in parapsychology (e.g. Nathanson, 1965). Parapsychology enjoys too low a status for psychologists to want to associate with it. On the contrary there are popular writers who produce articles on occult matters without professional qualifications. However even among investigators who call themselves parapsychologists one can easily find disagreement on definitions and methodology within parapsychology. There are different schools with different traditions. A school is united in a paradigm. How concrete a parapsychological school is can be ascertained by its attitude to the following points: Use of spontaneous and qualitative cases, or exclusively laboratory and experimental evidence, selection of problems (which are the high risk-problems?), models of psi and types of explanations, attitude to negative results, etc.

I will in this paper restrict my discussion to the Rhinean tradition, the most dominant school of parapsychology during the last forty years. Its leader is Joseph B. Rhine and among its adherents we find most of the American researchers who publish in the *Journal of Parapsychology* and in the *Journal of the American Society for Psychical Research*. It is a coherent group united by a similar conception of science and world-picture and depending upon a similar educational background.

The grounds for considering the Rhinean approach as a separate school and J.B. Rhine its leader, are:

- 1) In the 1930's Rhine formulated in his *Extra-Sensory-Perception* (1934) an exemplar for the paradigm. He supplied the perspective and the instruments for the school and he initiated a research plan. He gave the intellectual framework for the experimental parapsychology. Similar attempts were made earlier in Germany and Great Britain, but they were not successful.
- 2) Rhine has been controlling the main journal of experimental parapsychology ever since he started it in 1937. In later years he has not been in the formal position of editor, but nevertheless he has always dominated the editing policy and the selection criteria.
- 3) Rhine has been the director of the parapsychological laboratory and from 1964 onwards director of FRNM. These institutions have trained most investigators in experimental parapsychology. Leading parapsychologists often stress the urgent need for a professionalization of the field. Research is carried out by investigators with a basic training as psychologist, physicist,

biologist, or engineer. But apart from this the personnel in parapsychology needs to be trained in the special methodology of the field. Up till just recently the only place where such training was available was Durham, under Rhine and his associates (e.g. the Visiting Research Fellowship Programme). This condition has guaranteed an extremely uniform growth in the field.

4) Rhine has personally inspired many younger parapsychologists. With his enthusiasm and demanding force he has been a father figure, in the same way as Freud was to psychoanalysts in the early part of the century. His attitude and personality has been an example to the ethos of parapsychology: Try to keep together in the family and identify yourself totally with the field and its needs.

There are many parapsychologists who do not belong to the school and some who belong only to the periphery. In Britain parapsychology has never been institutionalized in the same way, while on the continent a different school exists with strong historical bonds, and with a leaning towards spontaneous cases, physical phenomena, and dynamical personality models. In the following, parapsychology stands for the Rhinean concept of parapsychology, unless otherwise stated.

PERSPECTIVES ON SCIENCE

Philosophy of science is a discipline which has other sciences as its axis. The examination of a science is always carried out in the light of a theory of research; a special perspective on science. However, there are many ways of looking at a science. One can look at science as:

- 1) results without research,
- 2) results and research without researchers,
- 3) results, research, and researchers.

The first perspective is a static one developed by the logical empiricists. It limits the study to the final product: completed theories, knowledge, and conceptual systems. It concentrates upon "the context of justification" and neglects "the context of discovery" as Hans Reichenbach (1951) has expressed it.

The second perspective is developed by Popper and Lakatos. They are interested in the growth of knowledge, how theories, problems and methods develop, but they disregard the researcher himself. "Knowledge in the objective sense", says Popper (1972), "is knowledge without a knower: it is knowledge without a knowing subject." Popper views the researcher as an incarnation of critical sense always prepared to give up his theories for new ones. But this perspective does not take into consideration that researchers are human beings and therefore not always rational.

The third perspective will be used in this study. To this belong,

among others, Kuhn and Feyerabend. They have exceeded the purely critical and rational aspects of research and have linked the philosophy of science with empirical disciplines such as history of science, psychology of research, and sociology of research. They study research 'in vivo'.

In my attempt to outline the paradigm of modern experimental parapsychology, I will use the approach of the "Gothenburg School" within the philosophy of science (Törnebohm, 1971; Törnebohm & Radnitzky, 1971). Research may be viewed as; growth and evaluation of knowledge, problems, and selection of instruments (intellectual techniques or hardware equipment). The task of the researcher is to draw increasingly detailed and more correct maps of an object of investigation; the territory. This transformation of knowledge is embedded in a human setting which directs the process. The directing factors are internal and external. The internal factors are here called the paradigm, a concept derived from Thomas Kuhn's "The structure of scientific revolutions" (1970). It will be used independently of Kuhn as a superior guiding factor in a research tradition. The paradigm determines the way investigators look at problems, select hypotheses and instruments. I will touch upon the following aspects of the paradigm:

- 1) Guiding interest of knowledge.
 - 2) World-picture and image of man.
 - 3) Concept of science and model of science.
- Other aspects, e.g. ethics, esthetics, are of minor interest in the context of parapsychology.

The paradigm is bound to the tradition, but not necessarily articulated. Generally it exists as a pre-supposition of an intuitive or tacit character, which is supplied through education and different forms of co-operation and communication.

Of course, there are also important external guiding factors - interests of others outside the research group, neighbouring sciences, or other paradigms which affect the discipline in question, social and economic conditions in science, politics of research, etc. - but I shall in this paper however concentrate on only the internal factors.

INTEREST OF KNOWLEDGE

What is the aim of science? To produce explanations for scientific problems. But what for? There are different types of interests of knowledge in science and these interests make up the social motivation for a science. They determine the economic support from the authorities and affect the planning of research. According to Habermas (1965) interests are collective and institutionalized

legitimacies for science. They are abstract, unlike the concrete motivation of the individual researcher. We can distinguish between at least four types of interests:

1) The hermeneutic: Its aim is to interpret meanings in communicative contexts. Interpretative disciplines are philology and traditions in history.

2) The technological: Its aim is to apply knowledge in order to improve conditions in society. Typical examples are physics and medical research.

3) The emancipatory: Its aim is to emancipate man from false assumptions by criticism and reflection, in order to create a free, mature, and autonomous man. The model science is psychoanalysis.

4) The innovatory: Its aim is to develop new perspectives and theories and to improve the scientific world picture.

The hermeneutic perspective does not seem to be of any relevance to parapsychology. The technological interest is the one most scientists stress, when they hope for economical support. Many claim that this interest distinguishes science from non-science. The primary characteristic of science is its predictive and controlling capacity. This interest is connected with some assumptions of reality: It is only successful in dealing with objective regularities in nature. All the scientific data must be repeatable. Theories have their value as instruments for prediction.

Some parapsychologists have insisted on the possibility of putting PK and ESP into practice. They hope to develop a technology. In the early 1950's Rhine and others saw the possibility of using psi in psychological warfare or in the secret service (Anon, 1949; Rhine, 1957). Also, subjects like Geller with his ability to affect the workings of a clock could make many skills unnecessary. But so far it is safe to say that the application of psi lies in the future. Some parapsychologists would even claim that the technological interest is non-existent, as the psi-phenomena are supposed to be non-physical and unpredictable (e.g. Pratt 1974). If one is unable to predict or formulate general laws, one cannot control and develop a technology. It is very hard to see how one will be able to attain scientific knowledge in that case. At least, parapsychology will not be a nomothetical science but an idiographical one. It will deal with particular and unique phenomena like historical events. (More of this distinction later on).

The most important interests of the Rhinean school are the emancipatory ones. In Rhine's opinion parapsychology tries to uncover hidden dimensions in man. It helps him to discover the true inner nature of man and to liberate him from the bonds of materialism. A new man will appear as the science of psi progresses.

This man will be free and self-conscious. He will have the capacity to reach beyond the limits of the self, to communicate directly with other human beings, and explore reality in an active way.

Rhine thinks that mechanism, behaviourism, and psychoanalysis have created, in the USA and of course still more in the communist countries, a split in the minds of men. The mechanistic perspective clashes with the civilized, idealistic, and christian moral code. In proving the existence of non-physical entities in man, parapsychology may be able to invalidate materialism and communism. Had parapsychology reached its current state before Marx and Lenin, it is possible that western civilization would not today have to struggle with the evil power of communism, as "the evidence of psi, showing that its operations defy physical description, experimentally disproves this materialistic theory of man on which communism has been founded." (Rhine 1957:246). Psi-phenomena may then provide an empirical foundation for the values of Western democracy.

When man discovers his own inner nature, he will also know how to live in harmony and happiness together in society.

"What we most need to know, and I think you will agree with me, is enough of man's basic nature to provide us with the understanding we will have to achieve and maintain, individually, and in all our institutions; the discipline and integration without which life and all other values become chaotic and meaningless" (Rhine 1959:15).

This true, authentic man is not bound by culture or society. He is universal. His nature is more positive than the behaviouristic and psychoanalytic image of man. It is closer to American democratic ideals.

You will not find this emancipatory interest so clearly stated as in Rhine's writing, but I believe most of the Rhineans would accept his view regarding the aim of parapsychology. It is also in agreement with the broad world view of "the third force" within american psychology (Allport 1955; Maslow 1962).

Finally, the innovatory interest is of course present in all scientific activities. But if it is too strongly expressed, as the only aim of science, then the concept of science is puristic ("science for its own sake"). Parapsychology is often viewed as unique. It will not provide us with bits of knowledge. It aims directly at the improvement of our world-picture. Parapsychology is the border science. I think this is a correct assumption: Parapsychologists are investigating the anomalous phenomena of the orthodox paradigm of science. Of course other disciplines also make anomalous discoveries, but it is not their salient characteristic. By admitting that the innovatory interest is a very important one

in parapsychology, it does not follow that individual parapsychologists within this institutionalized interest do not have personal motivations differing from a purely disinterested search for truth. The disinterestedness is part of the ethos of modern science, an imperative which parapsychologists attain to no greater extent than other scientists.

I think religious motivation and emotional personality characteristics tacitly determine the aspirations of most parapsychologists. But contrary to many critics (e.g. Rawcliffe, 1952) I do not mean that this necessarily invalidates parapsychology as a scientific discipline. If parapsychologists would try more self-reflection and thus uncover unconscious motivations affecting their research, it is possible that they would gain a more objective and fruitful perspective of their problem-field.

THE WORLD PICTURE OF PARAPSYCHOLOGY

The most important part of the paradigm is the world-picture. By this I mean a conception of a greater part of the reality than the one studied by a separate group of investigators. The world-picture is composed of ideas of the universe and of man's place within it. It determines the categories and perspectives which the researcher uses when he tries to map the territory. A problem is formulated in such a way that when viewed from the perspective of the world-picture, it is supposed to cover the most essential aspects of the territory. Often these aspects will be totalized. In a mechanistic world-picture only mechanistic properties of the object appear as real, or possible to investigate in a scientific way. The researcher has to restrict himself to a certain aspect of the territory. Of course the world-picture has direct consequences for the concept of science. If only mechanistic properties are regarded as feasible in the study of parapsychological phenomena, the researcher will use methods commonly employed for the study of mechanistic events.

The world-picture is in a process of improvement. It originates from mythical and religious concepts. During the progress in research it has been refined and transformed into theories of a more special kind. There are no clear-cut distinctions between scientific and non-scientific assumptions about reality. Metaphysics is a necessary precedent and ingredient in all theoretical systems. However in the early phases of a science the impact of the world-picture is greater, as many pre-conceptions of the territory still have to be articulated.

Sometimes a more external aspect of the world-picture is important, an ideology or "Weltanschauung", i.e. global views on

life, on man's place in nature, and existential questions concerning the meaning of life. These conceptions are essential in many humanistic disciplines and therefore also in parapsychology. Often the scientific part of the world-picture becomes confused with the ideological outlook. An ideology or a world-picture cannot be refuted by scientific arguments; they have to be criticized from a metaphysical standpoint.

To focus on world-picture assumptions in parapsychology seems very natural, as parapsychologists themselves often formulate their positions in terms of world views, perspectives, and scientific revolutions. Of course, every part of research is not explicitly stated within a world-picture context. In the main American journals there are two types of paper; the empirical and technical reports, and reflective, philosophical articles on "Paranormal phenomena, nature and man", or "Quantum theory and parapsychology". We can speak of two types of parapsychologists. The first one is the ideal of the objective and impassionate researcher. He provides the discipline with small pieces of research and tries to fit them into the developing problem-field. He rarely evaluates his attempts in terms of paradigmatic assumptions, even though he tries to induce explanatory concepts or theories (Roll, Stanford). The other type is the ideologist in the field. Sometimes he has been active as an experimentalist, but as he grows older and more experienced he turns to metaproblems (Rhine, Pratt, Murphy). Or he may be a professional philosopher attached to the field by interest (Broad, Chari). Or he may even believe that at present it is urgently needed to get better models in research, in order to improve the paradigm, and he pursues this parallel in his research (Beloff).

Many parapsychologists have found direct implications in parapsychology for our world-picture. Their findings have often been interpreted as arguments for a serious re-consideration of the assumptions about man and nature, which they think are present in orthodox contemporary science.

Rhine has been compared many times with Copernicus: His undertaking in the 1930's is thought to have had the same significance or even greater than the Copernican doctrine; a revolution which will restore the nobility of man where the Copernican revolution aimed at a new conception of the universe. But scientific revolutions are slow. Recently Pratt (1974) asked for an Einstein in parapsychology, a theoretical genius who would fulfill the new revolutionary promises.

When Kuhn's "The structure of scientific revolutions" appeared in 1962, some parapsychologists greeted his scheme of scientific revolutions as indirect support of the scientific status of

parapsychology and of their own revolutionary perspective (McConnell, 1968; Thouless, 1972). They interpreted Kuhn's concept of pre-paradigmatic phases of science - which Kuhn later abandoned - as implying that all sciences have once been in a pre-scientific state, and that therefore all pre-sciences like parapsychology will sooner or later end up within a Kuhnian paradigm.

Historical analogies prove nothing in contemporary science, but they may be illuminating. Let us take the case of Galileo and the Copernican revolution. Often this case is assumed to illustrate the consequences of a rigid a priori position for facts and theories which conflict with orthodox opinions. Galileo is regarded as the prototype for the detached and objective researcher, and his opponents as the same prejudiced sceptics just as the critics of parapsychology. Parapsychologists find it convenient to view the Galileo case as being a counter part to the debate on parapsychology. The two debates have some obvious similarities. However, from the internal evidence it could be argued that the Aristotelians were justified in rejecting the Copernican theory, as stated by Galileo.

The proposition that the earth moved around the sun was unwarranted, Aristotelians said, as it could not be brought into accordance with the then upheld tradition in physics, i.e. the Aristotelian, nor with the common man's conception of the world. Either the unexpected phenomena had to be fitted into the existing explanatory framework, or a new world-picture and physical theory had to be laid down, which would explain both old and new facts. If neither were possible, Galileo must be assumed to be wrong. (Galileo tried to illustrate the faults in the Aristotelian mechanics, but it was not until the Newtonian period that an explanation was supplied to incorporate all the new celestial observations.)

When Galileo's critics could not find any significance in a moving earth, they tried to criticize the weak points in his arguments. It was with the help of the new telescope that Galileo had made the startling observations of the satellites of Jupiter and the phases of Venus. No one could see these phenomena without the help of instruments, and the basic proposition about the movement of the earth was, according to Galileo, impossible to prove by direct verification. As is well known Galileo's instruments were brought into question. Some critics even refused to look into the telescope. Optics were notorious for their capacity to distort the true vision of objects. The telescope had an extremely small visual field and no legs. Besides, the lenses were dim. To be used efficiently the telescope demanded great

skill, patience, and sharp vision. Furthermore Galileo could not explain the function of the telescope to his critics. No wonder that he had difficulties in convincing them. They preferred to think that Galileo had been deceived by an optical delusion caused by the telescope.

These problems resemble the criticism of statistical design and procedure in parapsychology. A common belief at least among psychologists, is that the results of parapsychology could be explained as a methodological artefact. But the important point is, that most of the methodological criticism would not have arisen, had it not been for the fact that the clash between world-picture assumptions was so critical.

Among the different aspects of the paradigm in parapsychology it is the world-picture which differs most sharply from paradigms in other sciences. Of course, there are unique problems of methodology in parapsychology, but the main assumptions of what constitutes a science resemble those in e.g. experimental psychology. It is the world-picture and the image of man that have caused the primary scientific resistance; the way in which parapsychologists carry out research is merely a secondary source of opposition.

It is probable that the deepest roots of resistance lie in the cultural tradition in which the concept of the dualism of mind and body has developed, in the opposition between christian idealism and physicalistic science. The distinction between psi-phenomena and naturalistic phenomena is a sharp one in the Western culture, but this is not the case in the Indian tradition. Today a majority of Western parapsychologists stick to a dualistic ontology. They consider psi-phenomena as being the strongest available evidence for a dualistic world-picture and impossible to reconcile with present physical science. The world is made up of two different entities; a physical reality governed by physical laws, and a spiritual reality governed by non-physical laws. The image of man is Cartesian. Man consists of a physical body and a non-physical mind. They exist independently of each other, but they interact and exchange energy. Typical interactionist views of man have been developed by parapsychologists and philosophers as e.g. J.B. Rhine, Robert Thouless, John Beloff, and C.D. Broad.

The main assumption of Rhine's image of man is, I think, that psi-phenomena are extrasensory and non-physical. The non-physical aspect of psi is often expressed as a "fact", and it is generally acknowledged that no physical model of psi exists which is both testable and in accordance with the experimental findings in parapsychology. Furthermore, psi-phenomena refute the more crude versions of materialistic theories of mind, as e.g. the doctrine that all behaviour is explicable by events in the central nervous system, and in terms of present-day physical science. However, it

is not obvious that no neo-materialism based on tomorrow's science could be linked with parapsychology. Rhine's assumption of a clear-cut distinction between physical and non-physical phenomena is rather a strong one. I believe it is more reasonable to work out additional postulates in physical theories, than to completely give up the physical doctrines of modern science. At least it is premature to take such a decision. The law of gravitation in the late 17th century was impossible to assimilate with the contemporary mechanistic world view: No mechanism could explain how it worked. Of course some critics accused Newton of a metaphysical proposition. But the forced attempts to create a mechanism to illustrate gravitation caused the problem to survive until 20th century science and its refined physics found out, that the whole problem was ill-defined.

The Rhinean interactionism has left marks in both terminology and experimental designs. Parapsychologists with a physical model of psi have been active in the search for physical analogies, but the Rhinean perspective has given rise to experiments, in which the purpose is to show how psi operates independently of space, time, and material barriers. However, experiments where experimenters or subjects know about the actual physical conditions are ill-designed, as the non-physical assumption functions as a prerequisite. It affects the way in which the researcher views the problem and looks for solutions, and it possibly affects, in the case of parapsychology, also the outcome of the experiment. To sum up: A conservative position in the non-physical issue would be that psi cannot be accommodated in present physical science, and that there is small possibility that psi will never be integrated in future physical sciences. Such a development would however pose difficult problems for initiators of high-order theories in parapsychology.

In a very important way Rhine has changed the image of man in parapsychology. He started with the assumption that psi could be detected in most, possibly, all men. In this sense psi was taken as "normal". What followed was an interest in testing for psi in unselected groups of individuals. In the 1940's Schmeidler supplied the exemplar with her sheep-goat investigations. The earlier dominant assumption, determined by the historical and mythological contexts, was that psi was a rare quality. Researchers looked for specially gifted subjects or mediums. Even after Rhine's early success some British investigators persisted with this prescription.

Rhine also stressed that psi was not abnormal. In the early days of parapsychological investigation, when professional mediums were used as subjects, many investigators saw a connection between psi-

ability and a pathological or hysterical character. It is well known that psi has historically been regarded as a sign of magical powers. Many case reports have seen a relation between psi and individuals suffering from a state of stress, and there are studies of relations between psi and dissociated states of consciousness. Rhine however, says not only that psi is a general ability of all men in different degrees, but that it is related to "the higher thought processes". Psi-phenomena are not sensorimotor functions, but purely mind functions. The study of psi shows us a man of noble, free, and supreme character, contrasting with the image of man in psychoanalysis, where man, as Rhine views it, is depicted as a brute animal determined by low instincts (Rhine, 1953).

Rhine sometimes uses the expressions - the reach of the mind, or, mind over matter. He conceives of mind as superior to matter. This mind terminology has been noticed and criticized many times (e.g. Flew, 1953). I have already mentioned Rhine's ideology or Weltanschauung; the close relevance of parapsychology to ethics and politics. Like the humanistic psychologists in the early 1950's Rhine found Western man in an existential crisis, religion fading away, but materialism and communism gaining in strength. In this materialistic movement behaviorism and psychoanalysis developed with a corresponding image of man: Man as totally determined by the external environment or by his biological needs. Parapsychology, as Rhine saw it, was the best weapon to conquer this negative and corruptive world view. Only the awareness of man's non-physical nature could give Western man a positive view of life, could make him transcend his limitations, and admit the establishment of his divine inner nature. Gordon Allport (1955: 99-101) said

"I have written this because I feel that modern psychology is in a dilemma. Broadly speaking, it has trimmed down the image of man that gave birth to the democratic dream. - - - Soon, we venture to predict, psychology will offer an image of man more in accord with the democratic ideals by which psychologists as individuals do in fact live."

Replace psychology with parapsychology and we find similar notions in Rhine's "New World of the Mind", as for example (1953: 266, 272)

"It is, in fact, the main intellectual challenge of communism that it contests the rather loose Western concept of the personal freedom of the individual and confronts mankind with a philosophical determinism that, like an all-adequate religious creed, envelopes the whole of life. - - - But there is hope of a social awakening to a re-discovery of man - a man the sciences have never known."

The Rhinean ideology is an extremely idealistic and individualistic

one. It assumes that the production of ideas and the self-knowledge of men will be determinant of our history and will guarantee peace and harmony in our society (Rhine,1957; Rhine,1959). However, it has to be said that the ideological parts of the world-picture have not appeared to so great an extent in latter years. Even if Rhine himself may still see the connection between the non-physical assumption and the view of life, other Rhineans may admit the former but remain sceptical about the latter.

In the Rhinean paradigm there are also patterns of a behavioristic image of man. As these are connected to the concept of science in parapsychology, I will discuss them in the next part.